



INSIGHT on Coinage

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EDITORIAL

Number 22

Whenever a famous person such as Walter Breen passes, many rush to eulogize them, to tell the world how close they were to each other, and to list the wealth of contributions they have made. With time, the cloud which hung over Breen's life and reputation at the end will lose its importance to numismatists. He will be remembered as one of the greatest numismatic scholars of all time. Now, indulge me also so that I may explain what impressed me the most about this man I hardly knew.

I always took shots at Breen's research. After all, HE WAS THE CHAMP. I will brag to have bested him on a few occasions, but I'll also confess to being among the first to corner Walter at a coin show just to wait patiently for my turn to ask for his opinion on a coin!

What I admired most about him was that his opinions were given freely and were open to question. He would always listen to alternative opinions, debate, and then change his mind to your way of thinking while admitting that he had missed something! That takes a bigger than life individual, a true intellectual with a thirst for knowledge - plus humility. That's the only Walter Breen I knew.

One more thought. Even though Breen passed a huge amount of his information to others, judging from my personal experience, there was even more of his knowledge unwritten which is now lost. Each of us has something to contribute to numismatics. Don't keep it to yourself. Write it down - NOW.

In this issue, I'll share my discovery of a new hub variety on Trade dollars which is going to make much of the published hub combination information obsolete! I'm a detail oriented person so it's hard for me to believe that I've missed this new variety of U.S. Trade dollar for so long. Perhaps we can look at the details of coins so closely that we miss the larger picture. Hopefully, readers who are interested in Trade dollars will be able to cherry-pick some of the rare die combinations this discovery will reveal. It's unfortunate that this research was not available in time to be included in Bowers' new book on dollars. Read about hubs & dies first in BACK TO BASICS on page five.

NEW VARIETY

An in-depth analysis of the U.S. Trade dollar series by the Institute for Applied Numismatics and Research has revealed the existence of a major new Trade dollar Type. The discovery of this new hub variety has solved a major riddle - providing a solution

that has eluded me for the last fifteen years.

Insight readers will recall the problems that dealers and expert authenticators had identifying genuine British Trade dollars in the late 1960's (See issue #15). Most of the problems occurred when an authentication Ex-Pert incorrectly concluded that genuine coins which were cleaned or corroded were cast counterfeits because of X-ray diffraction testing. Genuine U.S. Trade dollars with the same appearance were also being condemned as fakes. This situation continued until a year after the formation of ANACS in Washington, D.C. Then, new personnel with a fresh approach to authentication were able to separate the fact from the fiction.

After a few years, a personal puzzle challenged my view of the status quo. In 1977, while comparing a suspicious looking (its surface was cleaned and porous) 1875-S Trade dollar to a known genuine coin, I noticed that a tiny protrusion on one of Liberty's fingers was missing on the questionable coin.



Type 1 and Type 2



Type 2M

A check of several Trade dollars of various dates and mints proved that the protrusion must be on the hub since it was present on all of the genuine coins I examined. After several weeks of exhaustive testing and comparisons, I reluctantly concluded that the suspicious coin was genuine even though the protrusion on the finger was absent. All other characteristics of the coin seemed to confirm authenticity. On several other occasions since then, I've examined Trade dollars missing this "marker" and in each case tried again to prove they were well made counterfeits! In most cases the coins proved to be genuine. Still, I was haunted by the feeling that these coins might somehow be excellent fakes!

Early this year at P.C.I., I had the opportunity to examine an extensive collection of U.S. Trade dollars. Old fears surfaced about some of the coins lacking the marker. With such a large

group of high grade original coins to examine, I was finally able to solve the riddle of the missing marker. I discovered that a major hub change occurred on the middle dates in the series. This discovery will necessitate a major revision of much of the current literature on Trade dollar varieties and die combinations. There are several obvious design changes between this newly identified Type and the previously defined Type 1 and Type 2 Trade dollars listed in such references as Breen's Encyclopedia.

Until now, Trade dollars have been divided into two main types which can be identified by their major design elements. For the obverse, collectors have used the tip-shape of the ribbon with "Liberty" and the number of fingers in Liberty's out-stretched hand. On the reverse, the presence, or lack of, a berry under the eagle's claw is used to identify the two long established Types. For example, Type 1 Trade dollars have three fingers, ribbon tips which curve to the left, and a berry under the eagle's claw. This hub appears on the early and mid-date coins of the series. The Type 2 Trade dollars have four fingers, ribbon tips which hook down, and lack the berry. There are no changes for identifying the Type 1 hub, but among coins presently classified as Type 2, which appear from 1875 on, there are actually two major Types with similar gross design elements (ie. the lack of a berry under the eagle's claw). I've named the newly discovered obverse and reverse hubs the: Type 2 Mid-Date (2M) as these hubs have been identified only on coins dated between 1875 and 1877 so far. They were used at each of the Mints. Several coins such as the 1876-S and 1877-S Trade dollars were struck with dies made from both the Type 2M and Type 2 hubs! There is an overlap of all three types during the mid years. Quick identification of Trade dollar Types can be made by using the design points shown in the photomicrographs:

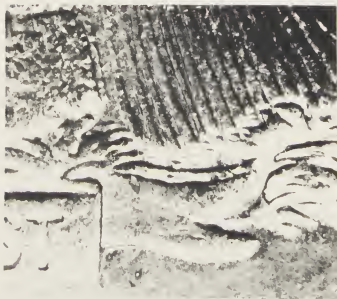
TYPE 1 - Easily identified by the pendant end pointing left on the obverse (Fig.1) and the berry on the reverse (Fig.2).



Since researchers and auction catalogers have failed to notice the existence of three varieties of Trade dollars, coins formerly identified as Type 2 in photo's or in the numismatic literature are either Type 2M or Type 2 lumped together! Both the Type 2M and Type 2 Trade dollars have their ribbon ends hooked down on the obverse and no berry under the claw on the reverse. Compare these characteristics to those of Type 1 coins on the previous page.



TYPE 2 and TYPE 2M - The ribbon over the date has a double cut right top on the 2M hub while a normal ribbon with a small notched lower tip occurs on Type 2 hubs used for mid and late date dies.



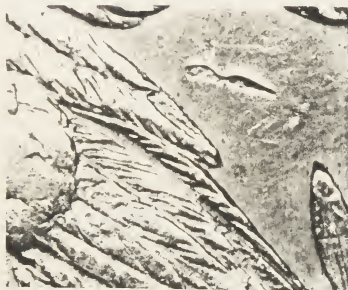
Type 2M



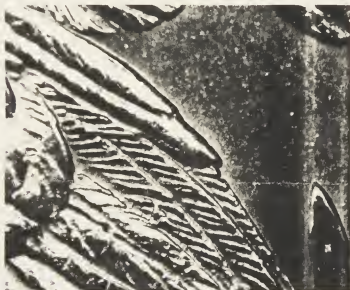
Type 2

There are several differences which can be used to identify the Type 2 and Type 2M reverse hubs (without the berry) including the shape of the eagle's head feathers or the presence of a period or comma after the word "Grains". However, the major difference

occurs in the shape of the eagle's tail feathers. The Type 2M hub has two roughly detailed feathers which protrude slightly from the back of the tail. In contrast, the late date Type 2 hub, used also on the rare Proof Only issues, has two smooth feathers which blend down the back of the tail. There are other differences which are found when the Type 2 and Type 2M coins are compared.



Type 2M



Type 2

At this time, I'm preparing a revision of data on the known hub combinations which specialists have devised for Trade dollars. Type 2M hubs seem to be used on some of the scarce micro-mintmarked varieties. One date exists with a dual hubbed (Type 2M over Type 2) obverse. I'll keep you posted. Good hunting!

BACK TO BASICS

A brief review of the preparation and the role that hubs and dies play in coin production will add to your understanding of my Trade dollar discovery. Additionally, it will verify the usefulness of hub and die characteristics for coin authentication.

* **Hub:** A coinage hub is a specially prepared, short steel cylinder with a raised, true-to-life rendition of one side of a coin. Two hubs, one with the obverse and one with the reverse design are used as the tools to make dies.

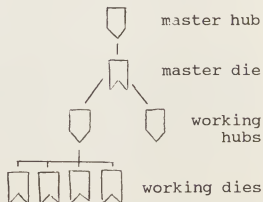
* **Die:** A coinage die is a similar cylinder with a reversed, incuse (sunken-in) impression of the coin as made by the hub. See the simplified illustration below:



After the design for a coin is approved, a large scale model is made. The model is placed in a special metal working lathe called a reducing machine which cuts a coin sized rendition of the design into a steel cylinder. The completed work, with a raised coin image, is called the Master Hub. The Master Hub is placed into a huge hydraulic press where it is used to make a Master Die. This is done by forcing the Master Hub into another steel cylinder which has been softened by heating (annealing). This process takes several pressings. The Master Die being prepared is removed from the press and annealed between each pressing.

In the same manner, the Master Die is used to make working hubs and these are used to make working dies. Finally, working dies are used in the coining presses to strike the metal blanks which become coins.

The hub and die making process looks like a pyramid when viewed as a chart on the right. From one Master Hub and Master Die come many working dies. This is an economical method of producing dies which are subject to wear and breakage by use. With such limited use to a Master Hub, the integrity of the coin's design can be preserved with much of its original appearance. This allows them to be used for a number of years. Contrast this to the life of the working dies which can in rare cases (due to some defect) be only a few minutes!



The family characteristics of a hub will be transferred to the dies which are made from it. This means that any changes in a hub due to polishing, retouching, or damage will show on the dies and then appear on the coins struck from them. Dies can also be altered or damaged in the same way. By examining the pyramid chart above, it should become clear that any changes made to any of the individual tools (dies or hubs) will affect the appearance of all those which fall below it along family lines. More on this later.

Knowledge of the characteristics of a coin's design, particularly as present on the hubs and dies used in its manufacture is needed for authentication. Changes in the condition of the hubs and dies through use will show as a softening in the design and die wear. Numismatists are also able to verify the authenticity of key date coins and varieties by the microscopic characteristics transferred from their dies. Referring to the Trade dollar article also in this issue, one can understand why a coin which was missing any part of its hub design (See page 2) would appear suspicious! At that time, no one expected that another, less common, hub existed.

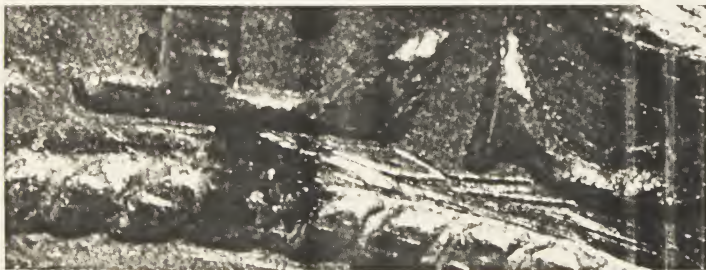
MICROSCOPICALLY SPEAKING

One of the "hot" topics in the numismatic press lately has been coin cleaning. Ironically, one of the universal warnings you will read or hear about coins is to never clean them. Still, many

people, including those who should know better, do strange things to coins while trying to improve them!

If you have been collecting for awhile, I'm sure you have seen a "gem" condition coin with just one small defect. Usually it's something which immediately grabs your attention enough to detract from the beauty of the remainder of the coin. Some of the greatest detractors are the black spots which especially occur on silver and copper coins. Unfortunately, these are extremely difficult or impossible to remove. I've said time and again that a person who learns to restore spotted copper coins has the potential to become a millionaire. But a word of warning, you will probably ruin a million dollars worth of coins while developing the method.

The photomicrograph below shows the attempts of some well-intentioned but misinformed soul who saw a black spot on the surface of a coin and tried to remove it with a sharp tool such as a knife, pin, or nail. None of you would be guilty of that - right?



carbon spot with scratch damage

MARKET NOTES

The commercial coin market has some perplexing ideas which must be resolved if we are to make the grading of circulated coins as easy as most believe it should be. As soon as money becomes involved (commercial grading), things get complicated.

Next time you are at a show, examine some of the low grade Type coins from the eighteenth or nineteenth century. You will see coins with central design elements with the detail of a fine, yet having hardly any of the legend visible. You'll also see coins which are Fair to About Good on one side, yet Good to Very Good on the other! It's called "Uneven Wear".

The point to all this is a warning. The modern consensus as explained in the grading books is this: "A coin which is graded as Good must have a full date". This is great in concept but leads to all kinds of fun and games - one of which happened recently. An 1918/7 quarter with the overall grade of F-12 was in the slab of a major grading service. Since the 19 was missing from the coin's

date, it was graded About Good! The coin was sent to another grading service which judged the coin's wear as Fine but took points away for the partial date. Now the coin resides in a VG-10 slab giving the dealer who owns it a nice profit. Someone will buy it soon (probably a dealer) because HE KNOWS the coin is really a Fine-12 and the grading service made a mistake calling it VG. If the coin is ever cracked-out and returned to the original grading service, I wish I could see the dealer's face when its returned as an AG-3! The grading services are putting values on the coins in their holders. Watch for uneven wear.

LETTERS

I received a nice letter from Bill Bugert recently which I will share with you in order to reinforce my commentary on the "only correct method" of counting the edge reeding on ccins: "one-by-one while using a stereo microscope". Bill and Randy Wiley are the authors of The Complete Guide to Liberty Seated Half Dollars which has just been published. I look forward to reviewing their book soon. Readers may recall that I first met Bill and Randy at a coin show. Thinking they were two new collectors puzzling over a coin, I wanted to add my two cents worth. I discovered they were hardly novices when I stepped right into a highly technical debate about die sequences for a scarce variety of Seated half dollar! These two know their field and a comment from one of them which I quote below means a lot to me.

"... I wanted to write you a quick note about your recent article in Numismatic News on coin edge reeding. As you may recall [I sure do, see above], at a Lanham coin show a few years ago, you, Randy Wiley, Charles Hoskins, and I had a conversation on edge reeding on Liberty Seated half dollars. Randy and I progressed significantly since that conversation and I wanted to send you some results of our study that will appear in our forthcoming book on Liberty Seated dollars... Since you specifically called out the inaccuracies of some similar books, I wanted you to know we use the single reed counting technique you discuss (see the text of the attached). We use this information regularly to assist in authentication and in determining die variety minting emission sequence."

COMING

Show commitments for P.C.I. have caused a postponement of my Rochester Grading Seminar. Dan Malerik has done a fine job taking applications and the seminar will be rescheduled.

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